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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,589	01/18/2002	Shimpei Miura	218206US3	7109

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
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ALEXANDRIA, VA 22314

EXAMINER

HODGE, ROBERT W

ART UNIT PAPER NUMBER

1746

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.

10/050,589

Applicant(s)

MIURA ET AL.

Examiner

Robert Hodge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/18/02, 4/18/03</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 4/18/2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the German references 693 02 902, 100 60 726 and 198 18 898 cited in the form do not include a concise statement of relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the above-mentioned information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 6, 13, 16, 22 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In the above-mentioned claims the phrase "its outer side" is used to explain the location of where a valve is supposed to be mounted. However it is unclear as to the actual location of said valve. Applicant should be aware that a fuel cell and/or a hydrogen gas supply have more than one outer side and as claimed said valve could be located anywhere on the outer periphery of the fuel cell and/or hydrogen gas supply.

3. Claims 4, 7, 14, 17, 23 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the above-mentioned claims the phrase "without interposing a flow passage member" is used to describe the valve being connected to the fuel cell and/or hydrogen gas supply. However it is unclear as to how the valve being connected to the fuel cell and/or hydrogen gas supply is accomplished without interposing the flow passage member. Applicant should be aware that it is also not clear what the interposing object is that could possibly come between the valve and flow passage member.

4. The examiner notes that the broadness of the phrases "integrated into", "built into" and "mounted to" as claimed are applied to any valve that is located or connected anywhere in the fuel cell system and/or hydrogen supply system that is used to control the flow of hydrogen gas. Inherently a valve that controls the flow of hydrogen gas from a source of hydrogen to a fuel cell must be part of the system in order to restrict or allow flow. The examiner further notes that the aforementioned phrase "without interposing a flow passage member" as claimed is interpreted by the examiner as meaning an unrestricted flow of fluid.

5. The applicant should be aware that the above statement regarding the broadness of the aforementioned phrases applies to all of the claims in this application.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-9 and 11-29 are rejected under 35 U.S.C. 102(b) as being clearly unpatentable by Gamo et al. European Patent No. 0 813 264 A2 (herein after referred to as Gamo et al.).
8. Gamo et al. teaches a fuel cell system (abstract and figure 1) being supplied with hydrogen (column 2, line 26) through an inlet (abstract and figure 1), which reacts with oxygen to make electric power (column 1, lines 15-17 and column 4 lines 57 -59) and the exhaust gases exit through an outlet (column 3 lines 20-22, column 5, line 37 and figure 1), with a valve used to control the flow of hydrogen gas (abstract, column 5 line 8) that is connected to the system (column 7 lines 26-29 and 39-40, abstract and figure 1) and that the hydrogen can be supplied from either an occluding tank (abstract and column 5, line 2) or a high pressure tank (column 2, lines 11-12). Gamo et al. further

teaches the supply of hydrogen gas to a fuel cell using a "hydrogen passage" (column 5, lines 12-14), which inherently does not restrict the flow of hydrogen gas.

9. Claims 1-29 are further rejected under 35 U.S.C. 102(e) as being clearly unpatentable by Kato et al. U.S. Patent No. 6,569,552 (herein after referred to as Kato et al.).

10. Kato et al. teaches a fuel cell system (column 1, line 16) being supplied with hydrogen (column 2, line 59 and figure 1) through an inlet (column 1, line 48), which reacts with oxygen to make electric power (column 1, lines 16-18 and column 3 lines 9-13) and the exhaust gases exit through an outlet (column 1, lines 26 and 42, column 3 lines 32-35 and line 55), with a valve used to control the flow of hydrogen gas (column 1, lines 42 and 48, column 3, lines 48-52) that is connected to the system (figure 5 and figure 12) and that the hydrogen can be supplied from either an occluding tank (column 12, line 3) or a high pressure tank (column 12, lines 3-4). Kato et al. also teaches the supply of hydrogen gas to a fuel cell using a "hydrogen inflow passage" (column 3, lines 48-52), which inherently does not restrict the flow of hydrogen gas. Kato et al. further teaches that the inlet and outlet of the fuel cell are connected (figure 12).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 5,366,821 to Merritt et al., teaches a fuel cell system with a hydrogen supply (bottled hydrogen or other), using a valve to control hydrogen gas flow
- b. U.S. Patent No. 6,632,552 to Yamanashi, teaches a fuel cell system with a hydrogen supply (hydrogen tank or occlusion alloy tank), with a valve to control the hydrogen gas flow
- c. U.S. Patent No. 3,589,941 to Eaton et al., teaches a fuel cell battery having a valve mounted in the frame of the fuel cell
- d. U.S. Patent No. 6,706,429 to Frank et al, teaches a fuel cell assembly with inlets and outlets including a valve in the fuel line

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RWH 9-16-04


BRUCE F. BELL
PRIMARY EXAMINER
GROUP 1746